



**Fayetteville  
Public Utilities®**

# **Electric Service Requirements**

**(July 2025)**

**FAYETTEVILLE PUBLIC UTILITIES  
ELECTRIC SERVICE REQUIREMENTS**

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# FAYETTEVILLE PUBLIC UTILITIES ELECTRIC SERVICE REQUIREMENTS

## **INSTALLATION**

In addition to the National Electric Code, National Electric Safety Code, and state and local building codes, Fayetteville Public Utilities (FPU) has installation requirements which must be followed.

**Please plan and allow ample time to meet with a representative from FPU Engineering Department before locating the meter base on your new construction. Simply call the Engineering Office to begin the process of obtaining electric service for your new construction. In addition, contact the Engineering Office if you have questions about these requirements or specifications or check our website [www.fpu-tn.com](http://www.fpu-tn.com) for additional information.**

### **General Specifications:**

#### **A. Overhead Residential Services:**

1. Where a FPU engineering representative specifies an eyebolt for service attachment, install the eyebolt at a point lower than the weatherhead and no more than 18" horizontally from the weatherhead. Eyebolts are available from the Engineering Department, if needed.
2. Where a FPU engineering representative specifies a service mast for service attachments, install 2-inch (for 200amp and less) rigid metal conduit (RMC) fastened with a minimum of 2 mast clamps bolted through the wall on all overhead residential services. Larger sized services will require larger conduit, please check the Electric Code or contact FPU for assistance.
3. In no case shall a residential point of attachment be less than 16 ft.
4. All new services must comply with the current Electric Code requirements for clearance. Codes can require more than 16' of clearance in many situations. FPU's engineering representative will assist in determining the required clearance.
5. Refer to FPU Standard Drawing *SD-1 and SD-2 Overhead Service Options 1 & 2* for additional specification details.

#### **B. Overhead Non-Residential Services:**

1. Where a FPU engineering representative specifies an eyebolt for service attachment, install the eyebolt at a point lower than the weatherhead and no more than 18" horizontally from the weatherhead. Eyebolts are available from the Engineering Department, if needed.
2. Where a FPU engineering representative specifies a service mast for service attachments, install 2-inch (for 200amp and less) rigid metal conduit (RMC) fastened with a minimum of 2 mast clamps bolted through the wall on all non-residential services. Larger sized services will require larger conduit, please check the Electric Code or contact FPU for assistance.

## FAYETTEVILLE PUBLIC UTILITIES ELECTRIC SERVICE REQUIREMENTS

3. All new services must comply with the current Electric Code requirements for clearance.
4. The FPU Service conductor must maintain a minimum of 16 ft. ground clearance at mid-span on all non-residential service lines. See a FPU engineering representative to confirm that the proposed point of attachment height will achieve sufficient ground clearance. If the point of attachment does not comply with the clearance requirements, FPU will not energize the service.
5. See FPU Standard Drawing *SD-1 and SD-2 Overhead Service Options 1 & 2* for additional specification details.

### C. Underground Services:

#### Customer Responsibilities:

##### Trench:

1. The Customer will be responsible for the trenching and backfilling necessary for the installation of underground facilities.
2. The trench shall have a minimum of 30" cover over conduit and shall be inspected by FPU prior to backfilling. **FPU can require the customer to dig the trench back up if no inspection is completed prior to backfilling.**
3. FPU will provide red location tape to place in the ditch after the ditch inspection passes.
4. The trench must be backfilled with clean, rock free dirt or bedded 6" above and below the conduit with fine (1/4" down) gravel. If conduit is under roadway or driveways, the conduit shall be bedded 6" above and below the conduit with fine (1/4" down) gravel. Refer to FPU Standard Drawing *SD-12 Trench Details* for additional specification details.
5. No large rock, brick, trash, or debris will be permitted as backfill.
6. A joint-use trench with gas, water, and sewer will not be allowed. Where gas, water and sewer run parallel to a secondary conduit, a minimum of 12" horizontal separation is required. Where gas, water, and sewer cross a secondary conduit, a minimum of 12" vertical separation is required. In instances where a joint use trench is unavoidable, written permission must be obtained from FPU and multiple ditch inspections may be required. In addition, any water, gas, or sewer trench requirements will also apply.
7. A joint-use trench with communications (telephone and cable television) must have a minimum 12" vertical separation from the secondary conduit and a 6" horizontal separation from the secondary conduit.
8. Communications (telephone and cable television), gas, water, and sewer conduits, equipment and meters must be located a minimum of 12" horizontally from FPU's secondary boxes.

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### **Conduit System:**

1. The customer shall bring conduit out of ground at pole or pole stake for FPU to connect to. All customer supplied conduit will extend out of ground a minimum of 3-ft and within 3.5" of pole or pole stake.
2. The conduit used below grade shall be 3" Schedule 40 PVC, grey electrical conduit, for 400 amps and less service entrances.
3. The elbow at the pole shall be rigid metal conduit with a minimum bend radius of 18" if service is over 100ft and Sch 80 PVC, if under 100ft. The conduit attached to the house, below the meter base, shall be 3" Sch 80 PVC securely fastened with two straps, two feet apart. The elbow at the meter base shall be rigid metal conduit with a minimum bend radius of 18" if service is over 100ft and Sch 80 PVC if under 100ft.
4. The conduit located inside an underground secondary box for secondaries shall be 3" schedule 80 PVC, grey electrical conduit. The elbows in an underground secondary box for secondaries shall be schedule 80 PVC, grey electrical conduit with a minimum bend radius of 18". Size of service conduit to be specified by FPU.
5. The conduit below grade and the elbows shall be installed by the customer. The location and installation of the pole conduit must be coordinated with FPU. The pole conduit will be installed by FPU and connected to customer conduit that ends approximately 3-ft out of ground at pole.
6. During construction, the conduit system shall be capped, using a threaded cap, plastic or tape, to prevent debris from entering the system. Additional ATC cost may be required if debris or mud blocks conduit and wire cannot be pulled through the conduit. In addition, the customer may be required to clean out conduit prior to wire being pulled, if conduit is blocked.
7. A pull rope (1/4" nylon rope) must be installed in the conduit system by the customer.
8. FPU requires an inspection of the ditch prior to backfilling. Please call the Engineering Office to schedule the inspection when ready.
9. Refer to FPU Standard Detail *SD-3 Undergrounding of Residential Service* for additional specification details.

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### D. Manufactured and Modular Home Services:

1. A **red** HUD label identifies **manufactured** or **mobile** homes. Meters may not be installed on manufactured or mobile homes manufactured prior to 1992. Refer to FPU Standard Drawing *SD-4 Mobile Home Service* for additional specification details.
2. **Modular** homes are identified by a **green** State of Tennessee label. Services for modular homes may be identical to overhead or underground services. Refer to FPU Standard Drawing *SD-1 Overhead or Underground Service* for additional specification details.
3. **Anchoring Sticker** – Prior to receiving a final electrical permit, manufactured homes are required to have an official State of Tennessee Anchoring Sticker (purple). This sticker will be located inside the breaker panel.

### E. Temporary Services:

1. Temporary Services are allowed for the sole purpose of having electricity while constructing a permanent service. Any other use must have prior approval.
2. Temporary Services are valid for a period of 2 years and must be inspected by the State Electrical Inspector prior to being hooked up. After 2 years, you will need to speak with FPU's Engineering Department.
3. Customers must sign an application, contract, and pay a temporary service fee for each renewal.
4. The temporary service pole and equipment shall be furnished by the customer.
5. Temporary services are subject to disconnect if service is not renewed in a timely manner.
6. Refer to FPU Standard Drawing *SD-5 and SD-6 Overhead or Underground Temporary Pole* for additional specification details.

### F. Customer Equipment:

1. Fayetteville Public Utilities (FPU) is a municipally owned utility, meaning FPU is owned by the City of Fayetteville. Equipment owned and/or maintained by the City of Fayetteville or FPU shall be the only equipment allowed to be mounted on FPU-owned poles.
2. Customer equipment (meter bases, transfer switches, private lights, etc.) shall be mounted on Customer-owned poles. Customer-owned equipment shall not be mounted on FPU owned poles. Customer equipment shall not be mounted on any poles owned by our joint use companies (AT&T, Ardmore Telephone Company, etc.) when FPU electric lines are attached to that pole due to safety concerns for both the Customer and Utility Workers.

## FAYETTEVILLE PUBLIC UTILITIES ELECTRIC SERVICE REQUIREMENTS

### G. Joint Use:

1. Joint Use Pole Attachments (phone, cable, internet, etc.) are allowed on FPU poles provided the third-party vendor has requested to attach and has a signed, executed contract with FPU for joint use prior to attaching.
2. Pole attachment requests or inquiries can be submitted via email to: [pole-attach@fpu-tn.com](mailto:pole-attach@fpu-tn.com).

### H. Point of Delivery:

1. The point of delivery is the point designated by FPU on the Customer's premises where utilities are to be delivered to the building or premises. All wiring, piping, and equipment beyond this point of delivery shall be provided and maintained by the Customer at no expense to FPU. **The meter and meter seals are the property of FPU and shall not be removed, damaged, or tampered with by the Customer.**

### I. Residential Metering Requirements:

1. All meter bases used in FPU's service area must be of the ringless, ring type or external locking band type meter base. All bases and hubs shall be furnished and installed by the customer. No bolt-in type meter bases are allowed.
2. All meter bases must be mounted between 5 and 6 feet above final grade.
3. All meter bases shall be mounted outdoors in a location that is easily accessible for FPU personnel. Any variation must be approved in writing by a FPU engineering representative.
4. Meter bases should not be located on or under porches, decks, or carports without prior approval from FPU. The meter must be readily accessible by FPU personnel and cannot be in an enclosed area. The meter base shall be located as close to FPU's transformer/pull box as possible. If the distribution panel is not located in immediate vicinity of the meter, a weatherproof disconnect may be required; refer to National Electric Code.
5. A **grounding electrode conductor (ground wire)** of a minimum of No. 4 copper or larger shall be run unspliced from a lug in the meter base to two driven **grounding electrode (ground rods)**. Two - 8 ft. driven **grounding electrode (ground rods)** bonded to **grounding electrode conductor (ground wire)** with clamp suitable for direct soil burial will be installed below final grade. Refer to the appropriate FPU Standard Drawing.

## **FAYETTEVILLE PUBLIC UTILITIES ELECTRIC SERVICE REQUIREMENTS**

### **J. Non-Residential Metering Requirements:**

1. All meter bases used in FPU's service area must be of the ringless, ring type, or external locking band type meter base. All bases and hubs shall be furnished and installed by the customer. No bolt-in type meter bases are allowed.
2. All meter bases must be mounted between 5 and 6 feet above final grade. If physical space available requires that meter bases be installed in a vertical arrangement, the highest meter shall be not more than six (6) feet above the floor to the center of the glass cover, and the lowest meter shall not be less than three (3) feet from the floor to the center of the glass cover.
3. All meter bases shall be mounted outdoors in a location that is easily accessible for FPU personnel. Any variation must be approved in writing by a FPU engineering representative.
4. All three phase services shall have a solid neutral wire running from the transformer to the meter base regardless of connection type.
5. For all 277/480 V self-contained services feeding from a transformer, a non-fuseable safety switch or breaker with provisions for an FPU padlock shall be installed on the source side of the meter base.
6. For all 120/208 and 120/240V self-contained & any instrument rated metering installations shall require a disconnect on the load side of the meter on the exterior of the building.
7. If more than one building is fed from the same transformer, a disconnect shall be installed on the source side of all Tap boxes and ganged metering installations.
8. If a service conductor feeds several meters (gang meter base, metering trough, etc.), each meter, disconnect, and main electrical panel inside each unit shall be labeled with identification numbers (address). They should be in a readily visible location on both the meter and disconnect. Labels shall be furnished and installed by the customer. Service will not be hooked up until labels are added.

### **K. Requirements for Underground Primary Installation:**

#### **Customer Responsibilities:**

1. Provide and install 3" Schedule 40 PVC conduit.
2. 3" Rigid Metal Sweep required at source pole.
3. 42" cover required over conduit.
4. Install a ¼" nylon rope in raceway for future wire installation.
5. When crossing a drive or roadway, 4" of concrete encasement or complete backfill of crushed stone is required.



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6. Install underground junction vaults (Refer to FPU Standard Drawing - SD-10):
  - a. Vaults to be left 4" above finished grade.
  - b. Vaults to be set or bedded on 6" of crushed stone.
  - c. Vaults shall have a layer of polyethylene between stone and vault base (vaults to be picked up at FPU warehouse - Notify FPU prior to pick up).
7. Contact FPU Engineering Office 24 hours prior to digging to schedule inspection of installation (931-433-1522 x340).
8. Call TN One Call System for digging clearance - (1-800-351-1111).

### **L. Pad Mount Transformer Specifications:**

Adjacent to buildings, transformers must generally be in accordance with the following requirements and guidelines.

1. A Transformer must be installed with the front (doors) facing away from the building, with no balconies or overhangs above.
2. The transformer must be accessible to line trucks (size and weight similar to a cement truck) for maintenance or replacement. Larger transformers will require additional space due to the necessity to set/move with a crane.
3. A transformer located near a building requires 6-10ft clearance from the building vertical surfaces, assuming no windows from grade to 18ft.
4. The sides of the transformer must be clear of all objects (including landscaping) for 3ft, and the transformer should be located 10-ft horizontally from doors, windows, or fire hydrants.
5. The front (door side) of the transformer shall have a clearance of 10-ft so that line crews can safely perform maintenance or repairs on the equipment. This required clearance includes landscaping. When encountering landscaping during emergency repairs, the utility can remove the landscaping (not very gently) or leave and await notification the offending vegetation has been removed.
6. During routine maintenance, the utility will not attempt to work on the transformer until the landscaping has been removed.
7. Transformers in locations subject to vehicle traffic must be protected, and oftentimes these protections must be in place before the transformer is energized, even during construction.
8. A vehicle barrier system is relatively simple. A series of bollards located around the transformer, spaced no greater than 54" on center, and located 36" away from the transformer are required. The bollards should be painted traffic yellow.
9. Bollards located around the sides and back of the transformer are permanent, made of concrete filled 6" rigid steel conduit, encased in 6" (min) concrete (all around) and 36"(min) depth of concrete. The permanent bollards shall extend 42" above grade, and extend 54" below grade.

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10. Bollards located in front of the transformer doors are required to be removable. Removable bollards are constructed of 6" PVC sleeve, 54" long and encased in 6"(min) concrete (all around) and 36"(min) depth of concrete. A 96" long section of 5" rigid galvanized steel conduit, with cap is then slid into the PVC sleeve.
11. Utility company transformers located on a site must also be located a minimum of 48" from any fire hydrants.

### **M. Requirements For Non-Residential Underground Primary Installation (Single Pad Mount Transformers):**

**Please note:** Requirements below are generic, and all items may not apply to every site.

#### **Customer Responsibilities:**

1. Provide and install two – 5" Schedule 40 PVC Conduit.
2. 5" Rigid Metal Sweeps with 48" radius are required.
3. Minimum of 42" cover required over conduit.
4. Install ¼" nylon rope in raceway for future wire installation.
5. When crossing a drive or roadway, 4" of concrete encasement or complete backfill of crushed stone is required.
6. Installation of underground junction vaults (Refer to FPU Standard Drawing - SD-10):
  - a. To be bedded on 6" of crushed stone.
  - b. Layer of polyethylene between stone and vault base (vaults to be picked up at FPU Warehouse – Notify FPU prior to pick up)
7. Installation of Switch Cabinets:
  - a. Installed per Manufacturer's Recommendations
  - b. Cabinet to be ordered by FPU (Coordination with FPU is required).
8. Contact FPU Engineering Office (931-433-1522 x340) 24 hours prior to digging to schedule inspection of underground installation.
9. Call TN One Call System for digging clearance (1-800-351-1111).
10. The customer is responsible for secondary side connections on transformers.
11. Refer to FPU Standard Drawing *SD-13 Typical 3-Phase Transformer Pad* for additional specifications.

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**N. Requirements For Non-Residential Underground Primary Installation (Two Pad Mount Transformers):**

**Please note:** Requirements below are generic, and all items may not apply to every site.

Customer Responsibilities:

1. Provide and install three – 5" Schedule 40 PVC Conduit.
2. 5" Rigid Metal Sweeps with 48" radius required.
3. Minimum of 42" cover required over conduit.
4. Install ¼" nylon rope in raceway for future wire installation.
5. When crossing a drive or roadway, 4" of concrete encasement or complete backfill of crushed stone is required.
6. Installation of underground junction vaults (Refer to FPU Standard Drawing - SD-10)
  - a. To be bedded on 6" of crushed stone.
  - b. Layer of polyethylene between stone and vault base (vaults to be picked up at FPU warehouse – notify FPU prior to pick up).
7. Installation of Switch Cabinets:
  - a. Installed per Manufacturer's recommendations.
  - b. Cabinets to be ordered by FPU (coordination with FPU is required)
8. Contact FPU engineering office (931-433-1522 x340) 24 hours prior to digging to schedule inspection of underground installation.
9. Call TN One Call System for digging clearance (1-800-351-1111)
10. The customer is responsible for secondary side connections on transformers.
11. Refer to FPU Standard Drawing SD-13 Typical 3-Phase Transformer Pad for additional specifications.

**O. Pole Services:**

1. Pole Services shall be a minimum 100amp Service. The pole and equipment shall be furnished by the Customer.
2. All meter bases used in FPU's service area must be of the ringless, ring type, or external locking band type meter base. All bases and hubs shall be furnished and installed by the customer. No bolt-in type meter bases are allowed.
3. All pole service meter bases must be mounted between 5 and 6 feet above final grade or above platform (in flood areas).
4. Pole services located in Flood Areas shall be installed per FPU's Standard Drawing SD-9 Pole Service in Flood Areas. All Equipment on pole must be located above the 100-year flood elevation. If equipment is submerged under

## **FAYETTEVILLE PUBLIC UTILITIES ELECTRIC SERVICE REQUIREMENTS**

- flood water, State of TN electrical inspections will be required. A passed inspection will be required prior to service being reconnected.
5. Refer to Standard Drawing *SD-7 Overhead Pole Service*, *SD-8 Underground Pole Service*, and *SD-9 Pole Service in Flood Areas* for additional specifications.

### **P. Generators:**

1. Customers shall notify FPU when installing home/business generators. Generators shall be installed by a qualified, licensed electrician in compliance with state and local electrical codes. TN law requires that a transfer switch be installed with the generator and the installation be inspected by the state electrical inspector. For additional information and an installation option, refer to FPU Standard Drawings, *SD-18 Portable Generator Safety* and *SD-19 Double Throw Switch Configuration* for additional specifications.
2. Customers may also elect to install a Generlink Meter Collar for generator use. Refer to FPU Standard Drawing, *SD-20 Generlink Meter Collar*, for additional specifications and requirements. This device is restricted to a 200amp service and cannot be installed on a CT meter.

### **Q. Right of Way:**

1. Existing Right of Ways (ROW) or easements for a primary electric line can vary from a minimum distance of 30ft to over 150ft in our service area. Customers should not build permanent structures within those easement boundaries.
2. Transmission Lines belonging to the Tennessee Valley Authority (TVA) are also present in our service area. Permits are required from TVA to cross or build in the ROW or easement belonging to TVA.
3. If you have questions about a ROW, call or email the Engineering Office for assistance.

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### **R. Moving of Existing Power Lines:**

1. Customers requesting existing power lines to be moved for various reasons, such as building houses, shops, pools, barns, grain bins, etc. will be required to pay all associated cost of moving the existing power line(s).
2. In areas where the moving of the existing power line would benefit FPU and power grid for reasons such as: Flood prone areas where the line is moved to a more accessible location, existing row crop areas, where the line is moved to a more accessible location for yearlong access, extremely hard to access areas, where the line is moved to a more accessible location, etc. FPU management may consider moving the line if granted proper easements from property owners by utilizing budgeted funds. In most cases, these projects are generated or requested by FPU.

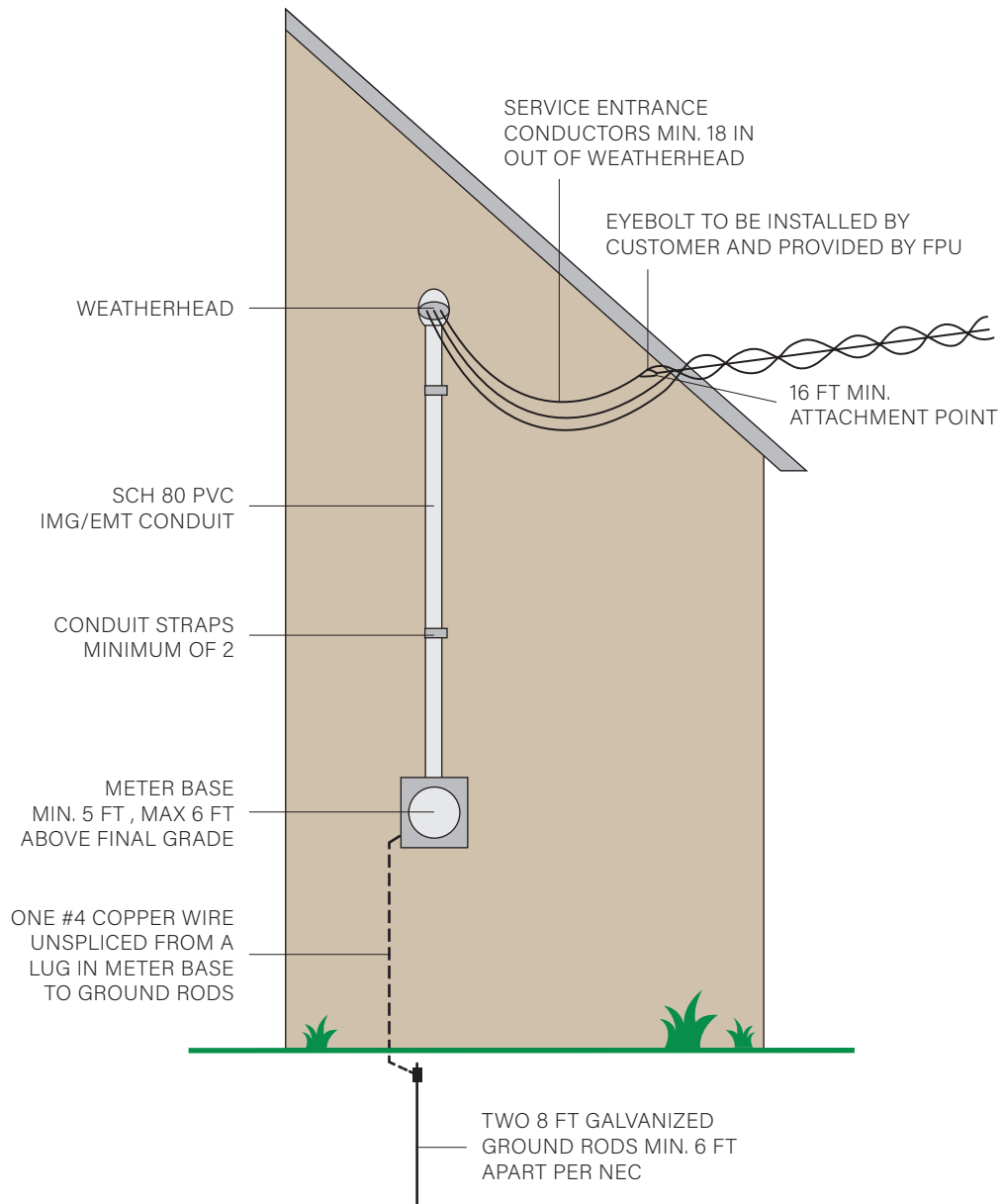
**FAYETTEVILLE PUBLIC UTILITIES  
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**FPU STANDARD DRAWINGS**

**Standard Drawings are located on the following pages.**

# OVERHEAD SERVICE OPTION 1

REVISED AUGUST 2024

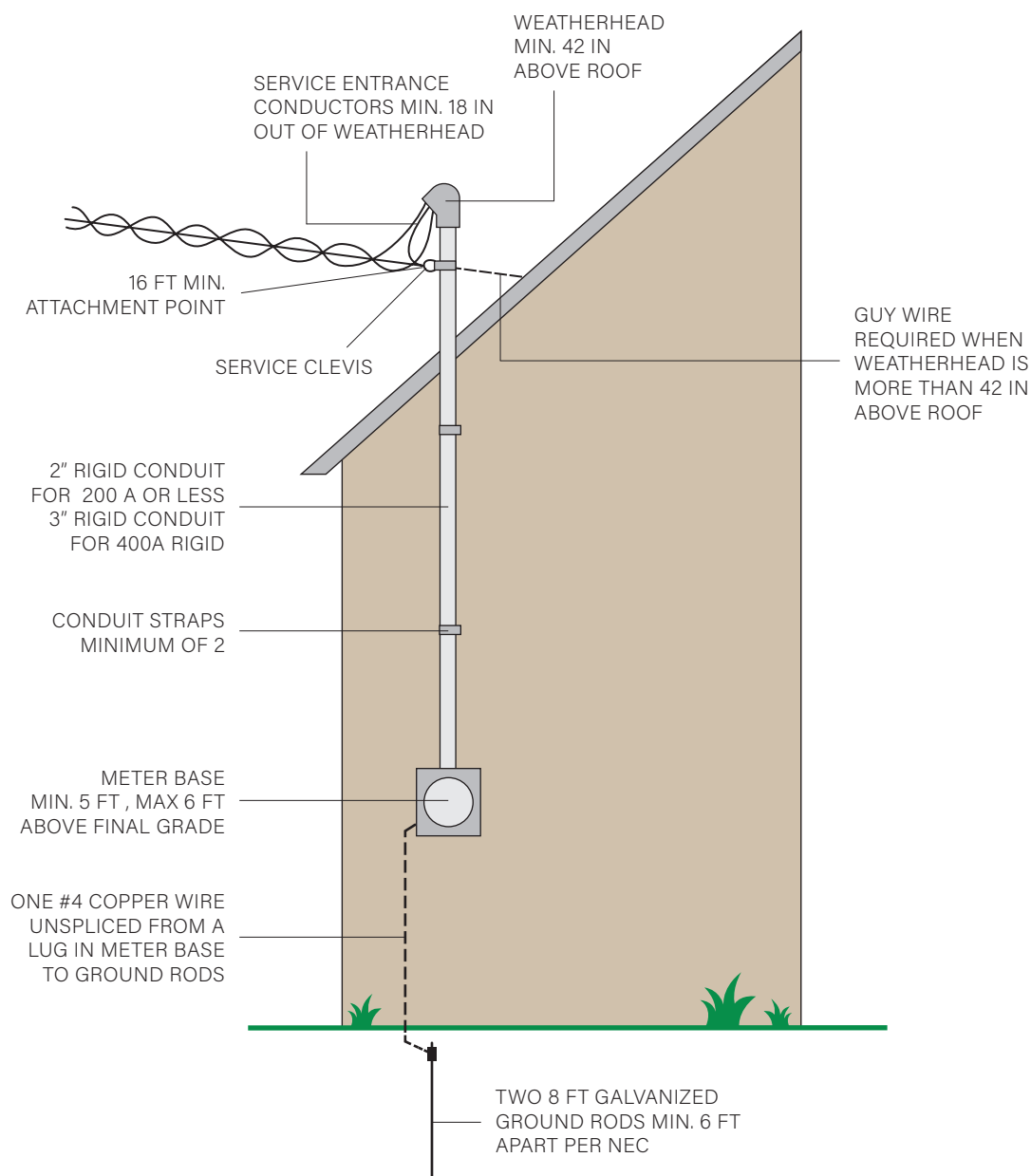


## NOTE

All customer owned facilities must be in compliance with this drawing and the National Electric Code (NEC). All wiring must be approved by the State Electrical Inspector prior to the electric service being provided.

# OVERHEAD SERVICE OPTION 2

REVISED AUGUST 2024



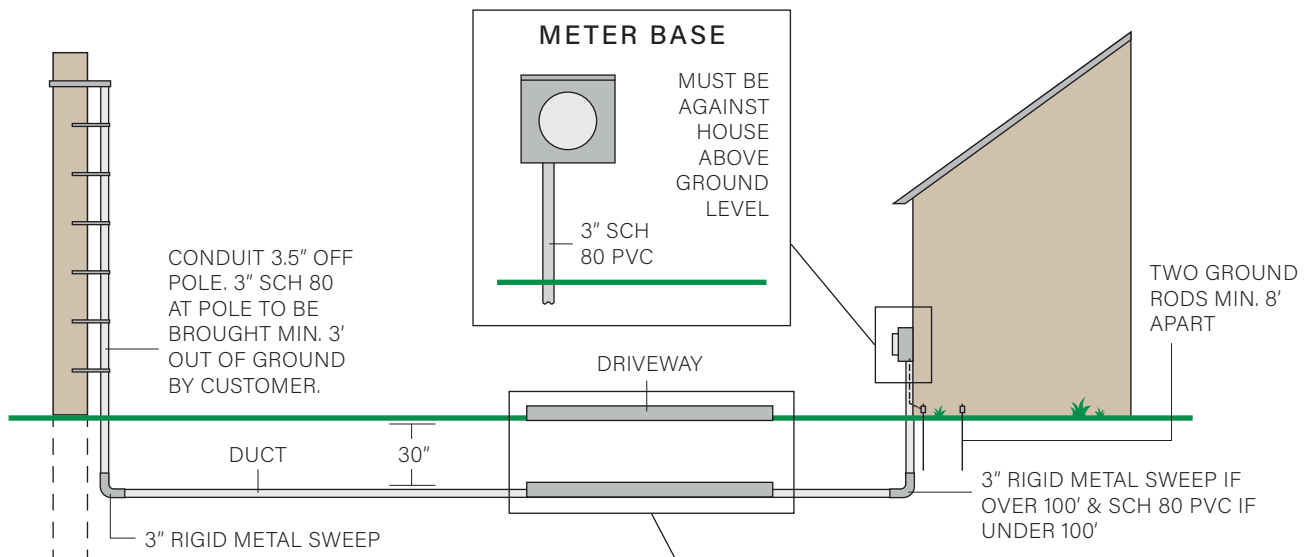
## NOTE

All customer owned facilities must be in compliance with this drawing and the National Electric Code (NEC). All wiring must be approved by the State Electrical Inspector prior to the electric service being provided.



# UNDERGROUND SERVICE

REVISED AUGUST 2024



## NOTES

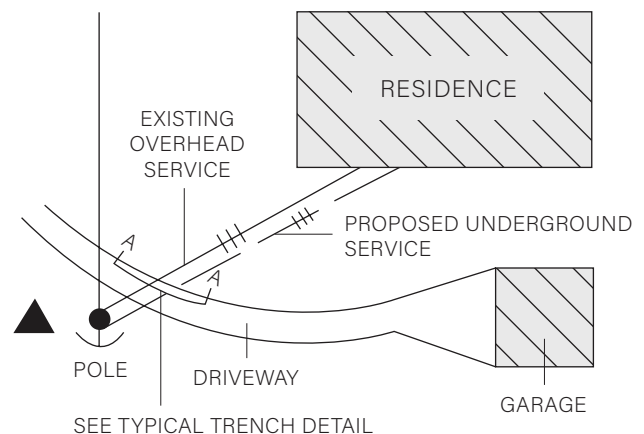
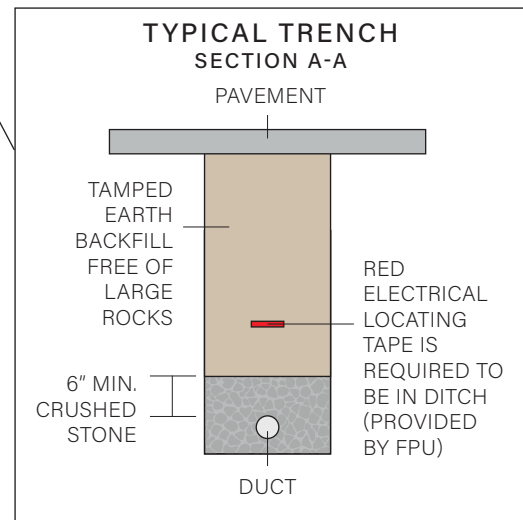
DUCT SIZE: 3" RIGID OR PVC SCHEDULE 40 ON ALL INSTALLATIONS UNLESS OTHERWISE SPECIFIED BY FPU.

### NEW HOMES

1. Customer provides trench and duct to FPU specifications. FPU determines the duct route. Customer leaves a ¼" Nylon rope in the duct. Six inches of crushed stone is required under driveways, patios and other load bearing surfaces. FPU inspects duct installation prior to back-filling. Elbows are not allowed in conduit run.
2. FPU provides and installs new underground service cable from pole or pedestal to meter base in customer duct.

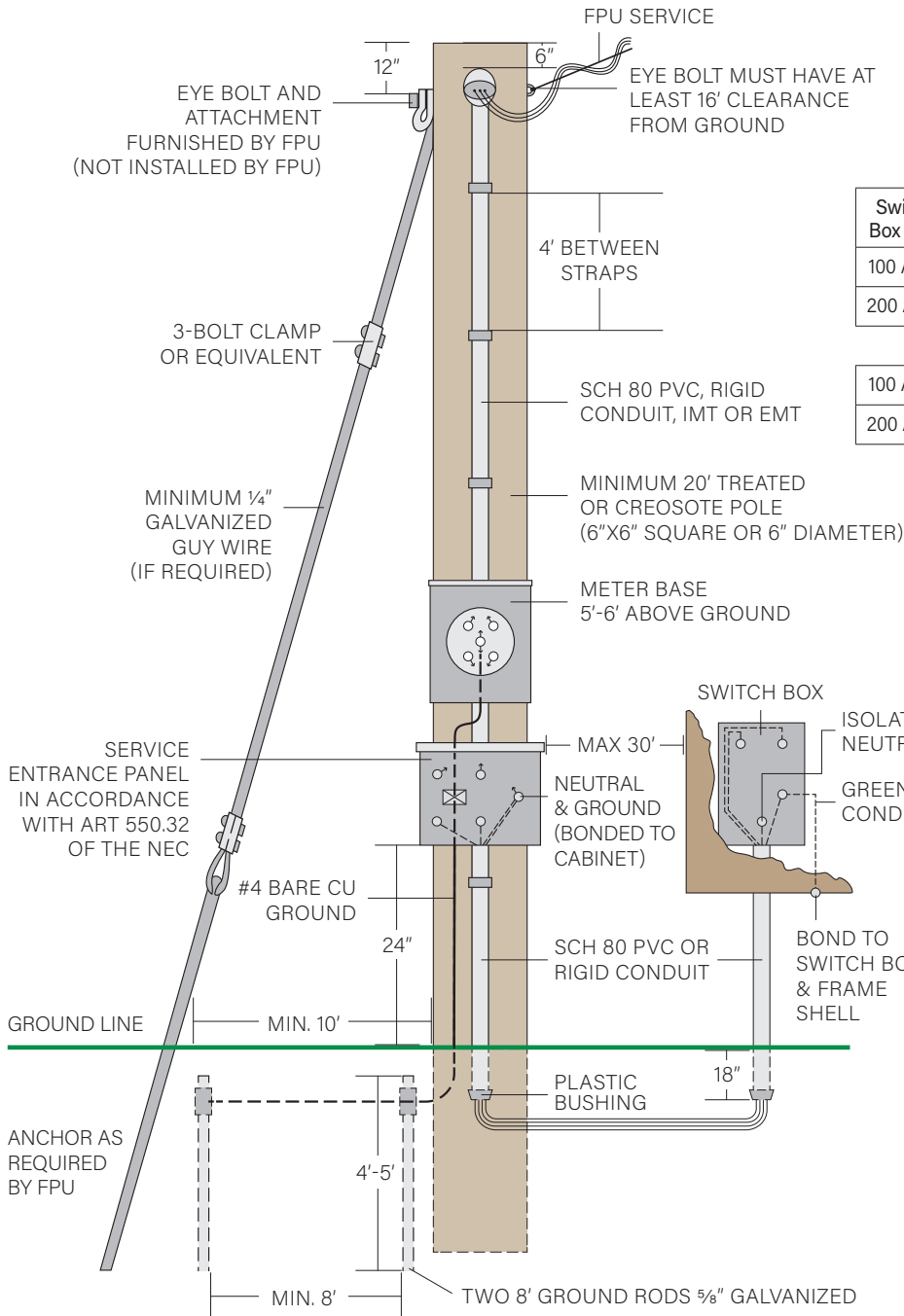
### EXISTING HOMES

3. If customer is increasing his panel size as part of his undergrounding work, customer will pay for cost of wire and all related costs.
4. If customer is not changing out his panel or adding significant new load but converting to underground service for his convenience, the customer will pay for cost of wire and all related costs.
5. If the existing underground service needs to be replaced because of a fault or other violations, the customer will bear the cost of the conduit and installation.



# MOBILE HOME SERVICE

REVISED AUGUST 2024



Switch Box Size	Conduit Size	Conductor Size	Minimum Neutral	Grounding Conductor
100 Amp	1 1/4"	#4 CU	#6 CU	#8 CU
200 Amp	2"	#2/0 or #3/0 CU	#1 CU	#6 CU

(All aluminum equivalents may be permitted)

Switch Box Size	Conduit Size	Conductor Size	Minimum Neutral	Grounding Conductor
100 Amp	1 1/4"	#2 AL	#4 AL	#6 AL
200 Amp	2"	#4/0 AL	#2/0 AL	#4 AL

Cable insulation type must be one of the following:  
RHH, RHW, THHN, THWN, THW, XHH, XHHW or XHHW-2.

Where rigid underground raceway is used, a length of flexible conduit between 12" and 24" is to be installed between under-side of home and ground.

Four continuous, insulated, color-coded feeder conductors, one of which shall be a grounding conductor, insulated. Conductors sized to handle applicable load.

Cable placed in PVC conduit must be 18" deep.

Cable placed in Rigid conduit must be 6" deep.

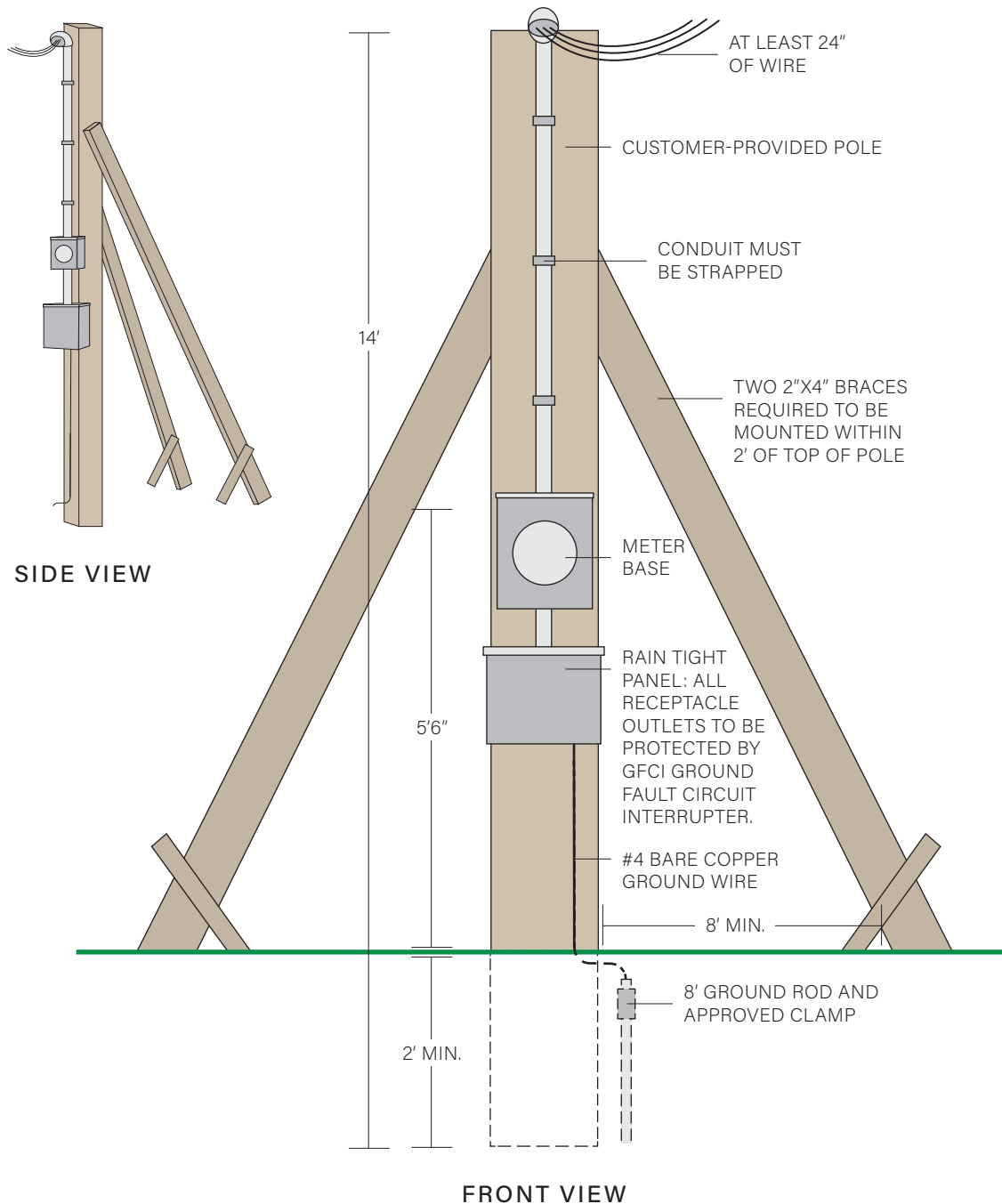
Cable buried directly must be 24" deep.

## NOTE

- All conduit, fittings, switches and wiring will be owned and maintained by property owner.
- All wiring must be inspected by the State Electrical Inspector.
- Guy is required for all services over 60 feet in length.
- FPU representative must check site before pole is set and wiring is done.
- Pole service shall not be rated less than 100 amp.
- Must have external locking band type meter base.

# OVERHEAD TEMPORARY POLE

REVISED APRIL 2025



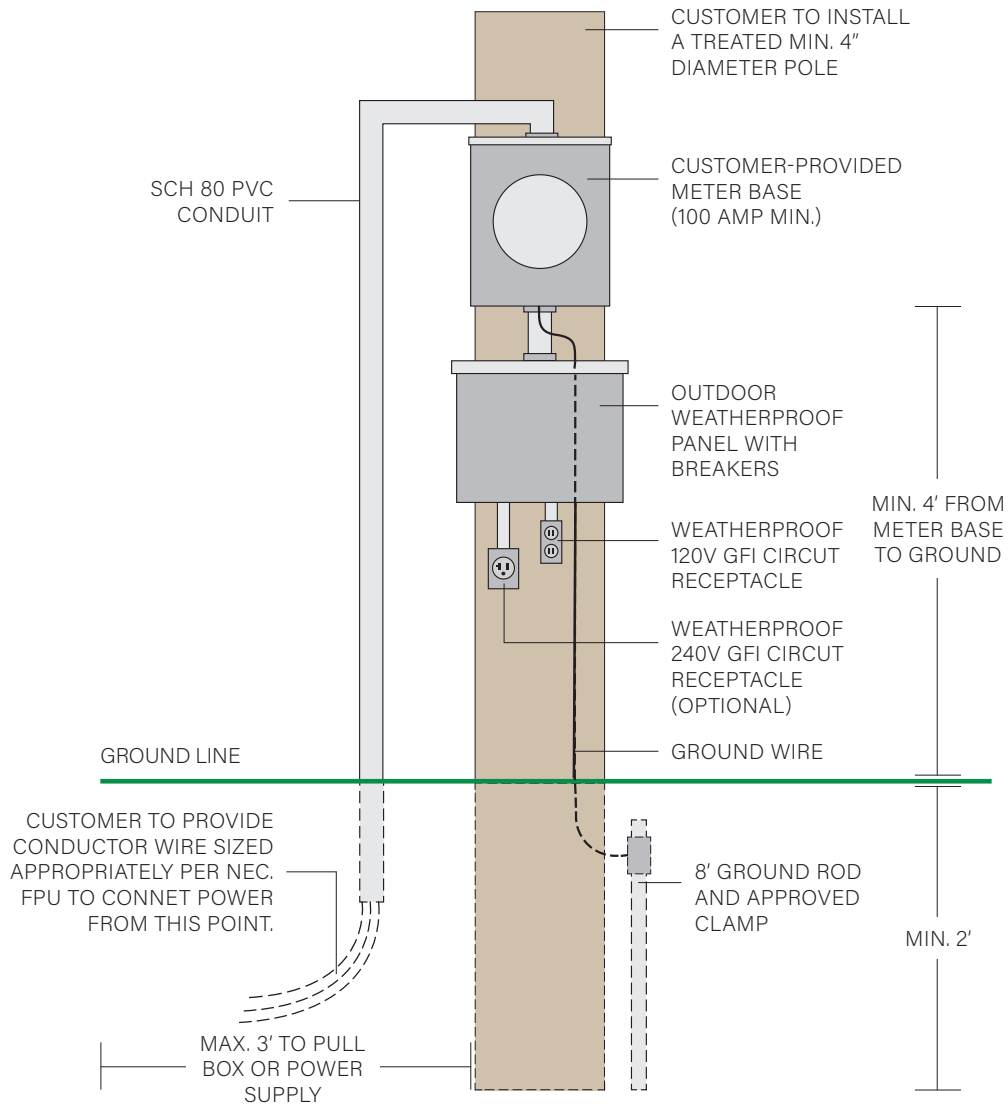
## NOTE

- All wiring must comply with Article 305 of the National Electrical Code.
- Two 2"x4" braces are required and must be attached within two feet of top of pole.
- Service must be mounted on a minimum 2"x6"x14' or 4"x4"x14' set with at least 2' in the ground.
- Pole must be a max of 20' from transformer pole.



# UNDERGROUND TEMPORARY POLE SERVICE

REVISED AUGUST 2024



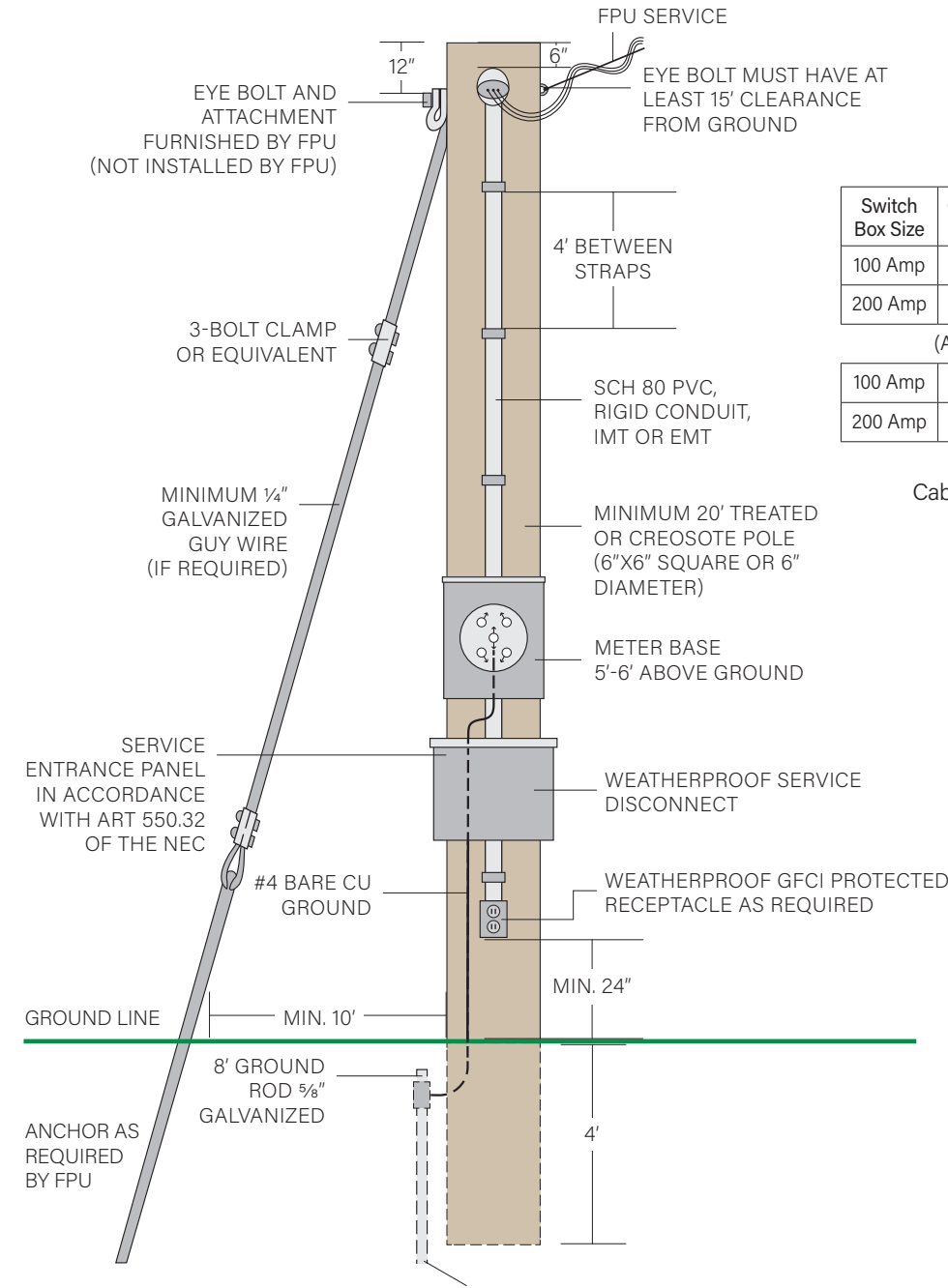
## NOTE

- All materials to be mounted securely and must be weatherproof.
- Installation and material shall be per National Electric Code (NEC).
- Meter base to be installed a minimum of 4' above ground.
- Service will not be connected until any/all required inspections have passed, service application completed and fees/deposits are paid.



# OVERHEAD POLE SERVICE

REVISED AUGUST 2024



Switch Box Size	Conduit Size	Conductor Size	Minimum Neutral	Grounding Conductor
100 Amp	1 1/4"	#4 CU	#6 CU	#8 CU
200 Amp	2"	#2/0 or #3/0 CU	#1 CU	#6 CU

(All aluminum equivalents may be permitted)

100 Amp	1 1/4"	#2 AL	#4 AL	#6 AL
200 Amp	2"	#4/0 AL	#2/0 AL	#4 AL

Cable insulation type must be one of the following:  
RHH, RHW, THHN, THWN, THW, XHH, XHHW or XHHW-2.

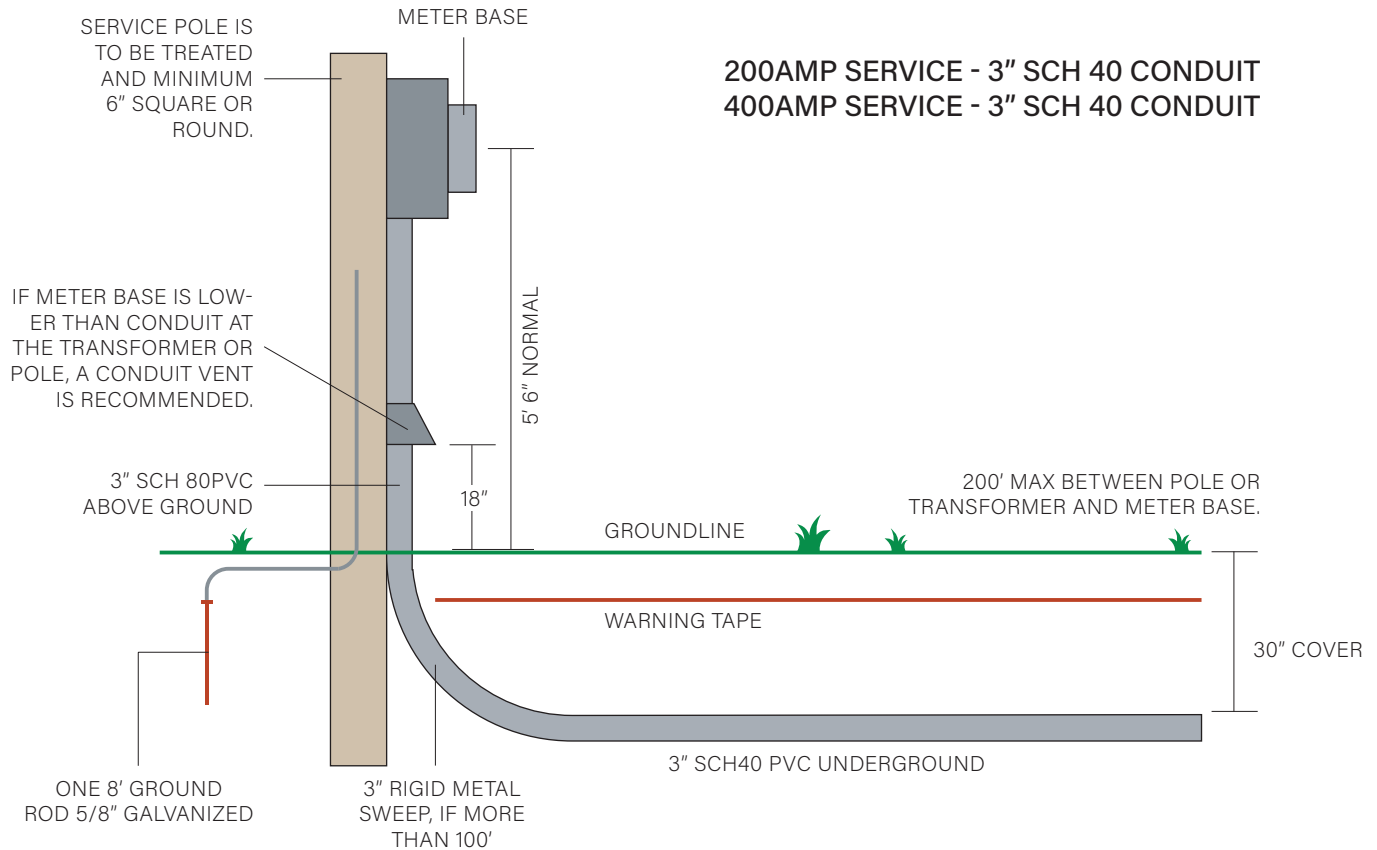
## NOTE

- All conduit, fittings, switches and wiring will be owned and maintained by property owner.
- All wiring must be inspected by the State Electrical Inspector.
- Guy is required for all services over 60 feet in length.
- FPU representative must check site before pole is set and wiring is done.
- Pole service shall not be rated less than 100 amp.
- Must have external locking band type meter base.



# UNDERGROUND POLE SERVICE

REVISED AUGUST 2024



## TERMS

Fayetteville Public Utilities shall meet with owner/developer to plan electrical service.

Owner shall: install pedestal; open/close all ditches; furnish and install conduit, 1/4" or larger nylon pull rope, and underground type meter base.

Customer must have all conduit run, pedestal, and 1/4" nylon rope installed before FPU will inspect ditch. Electric service shall be installed in a separate ditch from other utilities unless FPU gives prior approval.

Wire from meter base to breaker box must terminate in bottom lugs of meter base and must not cross FPU wires.

FPU will provide and install service wire from FPU pole to the top lugs in the meter base.

Tennessee State Deputy Wiring Inspector will inspect from meter base into the house. A passed service release or final inspection is required before service is hooked up by FPU.

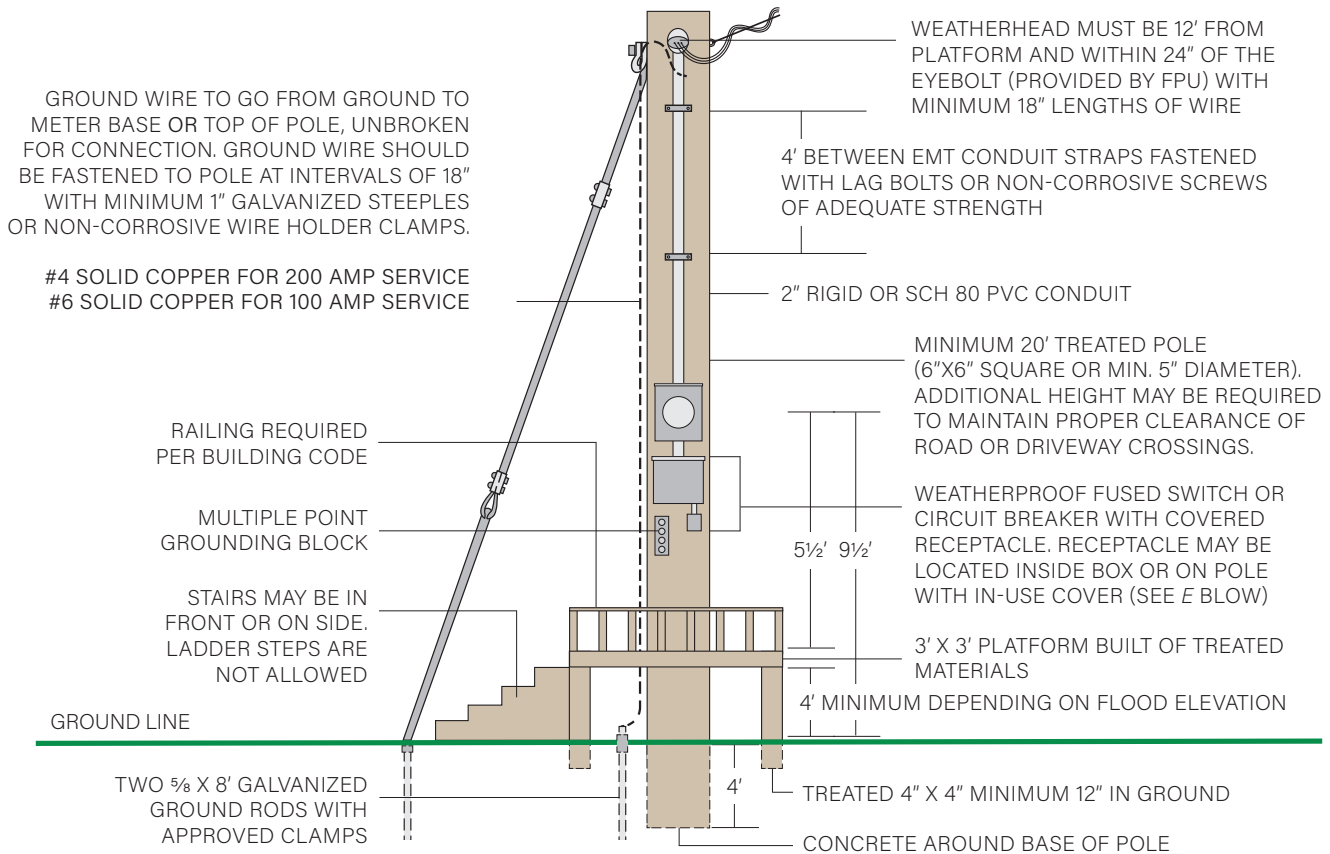
*All Aid-to-Construction, fees and paperwork must be paid and completed prior to service being hooked up.*

## NOTES

- If the ditch can not reach the required depth, contact FPU.
- If the ditch crosses another utility. FPU is to be located in the lower position and 12" separation is required.
- No ditch can be covered until FPU has performed the inspection and pulled a warning tape. (Install tape 12" below final grade.)

# POLE SERVICE IN FLOOD AREAS

REVISED AUGUST 2024



## MINIMUM CLEARANCE REQUIREMENTS

- 18' minimum clearance is required over public roadways
- 16' minimum clearance is required over driveway crossings

## POLE SERVICE AND RV POLE SERVICE

- If pole is to be used as RV pole, an RV plug may be added to pole but must have 120V GFCI weather resistant receptacle with in-use cover.
- Receptacles should be sized to meet RV load.
- All receptacles should be protected by a circuit breaker appropriate to match RV load.
- RV receptacles must be equipped with in-use covers.
- All poles must have at least one GFCI protected 120V VAC weather-resistant receptacle with in-use cover

*All Wiring must meet State of Tennessee wiring code and the National Electric Code (NEC). FPU will not connect to a meter pole until approved by a Tennessee Deputy State Inspector.*

## MINIMUM CONDUCTOR SIZING

### RESIDENTIAL

- 200 AMP COPPER: #2/0 HOTLEGS WITH #1 NEUTRAL
- 100 AMP COPPER: #4 HOTLEGS WITH #6 NEUTRAL

### NON-RESIDENTIAL

- 200 AMP COPPER: #3/0 HOTLEGS WITH #1/0 NEUTRAL
- 100 AMP COPPER: #3 HOTLEGS WITH #4 NEUTRAL

### RV

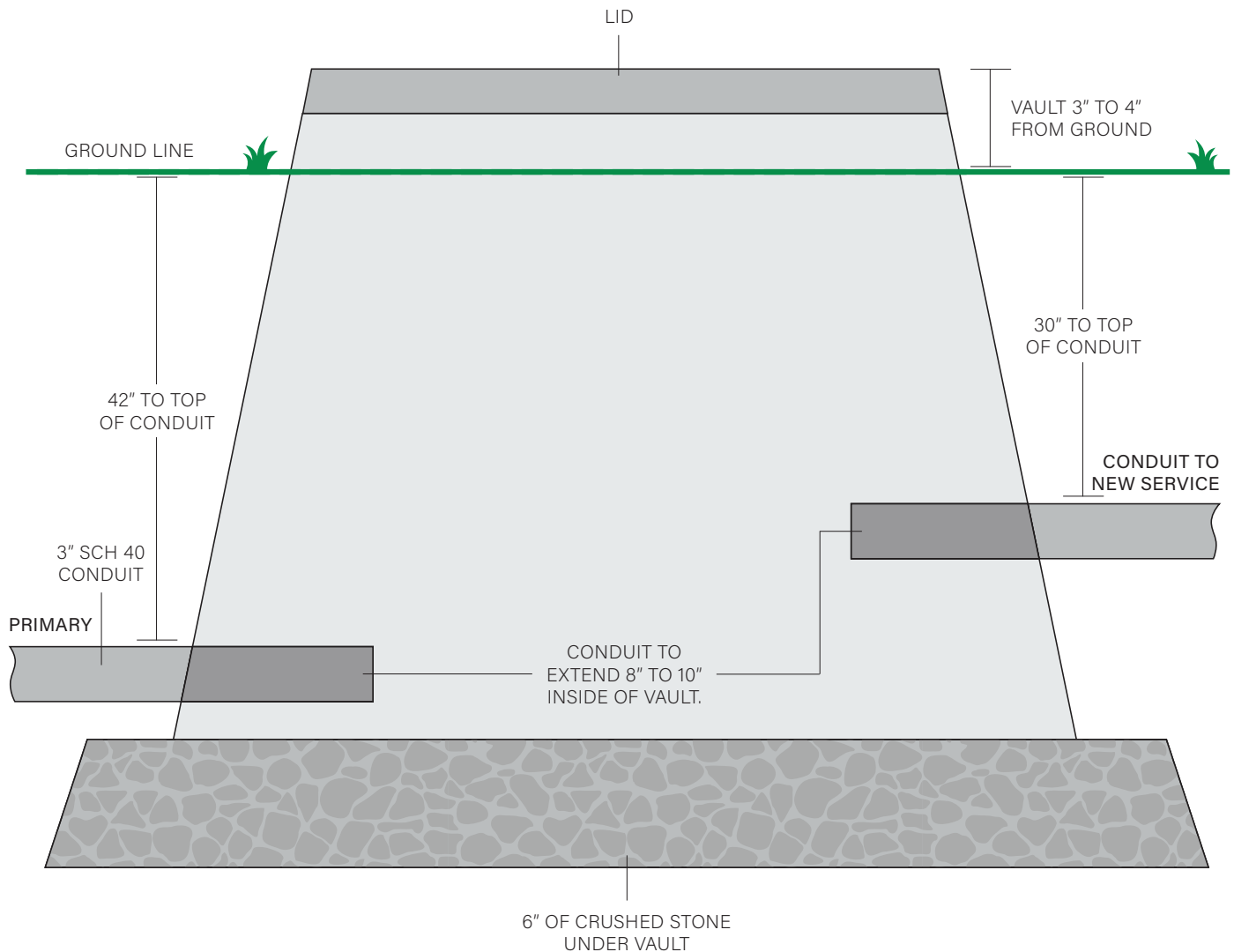
- 200 AMP COPPER: #3/0 HOTLEGS WITH #1/0 NEUTRAL
- 100 AMP COPPER: #3 HOTLEGS WITH #4 NEUTRAL

*All conductors should have 18" at weatherhead*

*Guying is required if pole is more than 60' from service pole. A minimum 1/2" rod screw anchor shall be used. If guying is necessary, the owner is required to install guy(s) for the pole.*

# UNDERGROUND PRIMARY VAULT

REVISED AUGUST 2024



## NOTE

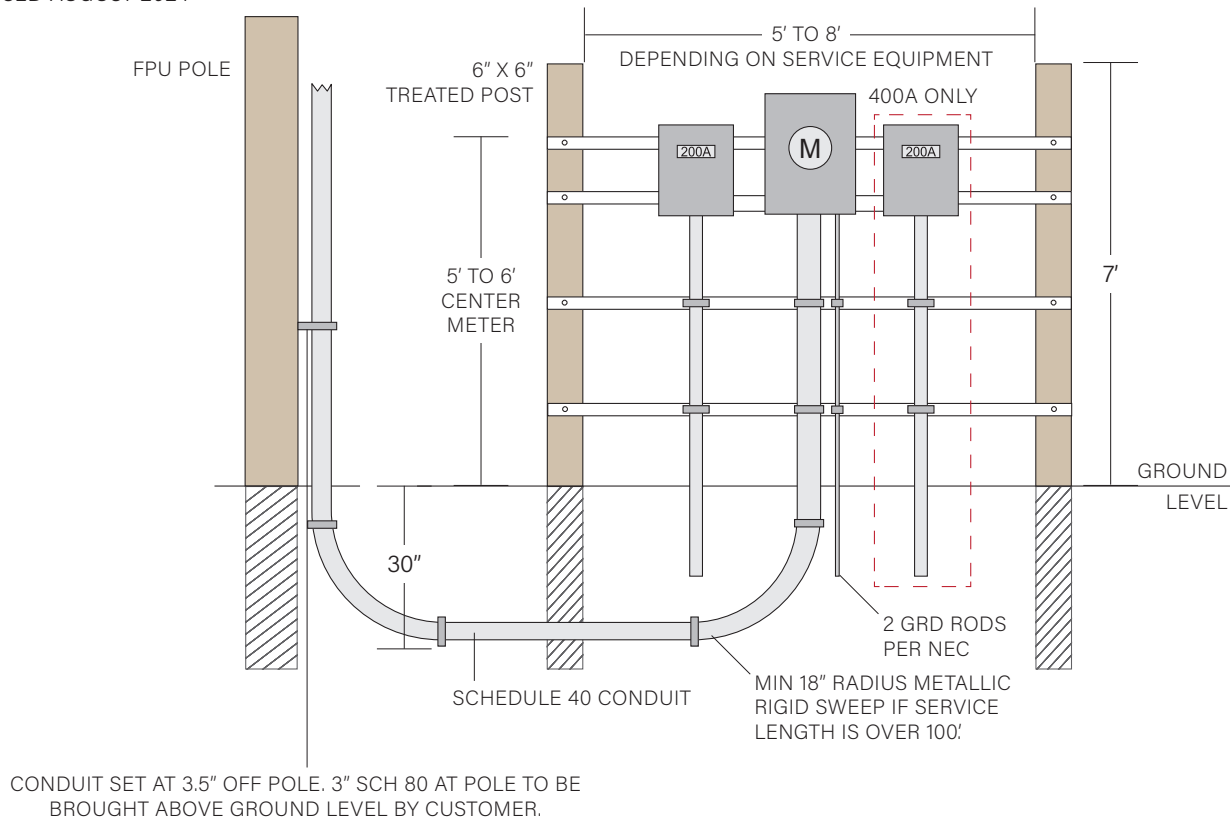
- Underground spans maximum 500' before vault.
- Conduit shall slope upward to vault depth approximately 10' prior to entering vault.
- FPU will set transformer when applicable.





# 400 AMP OR LESS SINGLE PHASE LOAD CENTER

REVISED AUGUST 2024



Customers must meet with FPU prior to digging and installation of equipment.

## FPU RESPONSIBILITIES

- Meter set (400A or less). Location to be determined by FPU Representative.
- Installation of conduit brackets and conduit up the pole will be installed per specifications.

## NOTES

- All wiring must meet NEC and local requirements and must be approved by state electrical inspector.
- Grounding electrode as required per NEC/State of Tennessee requirements. Ground rods must be a minimum of 12" from underground service conduit.
- State Electrical Inspector must inspect and approve any additional or new wiring.

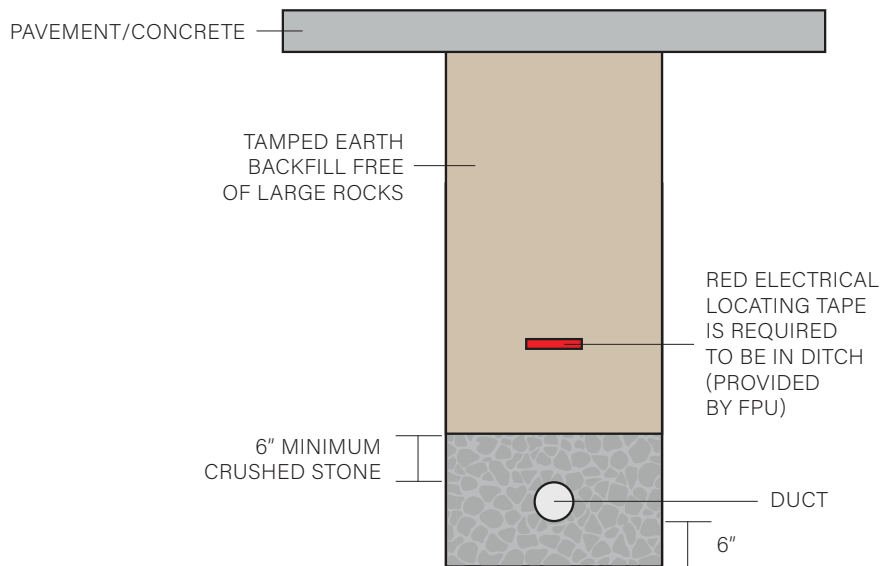
## CUSTOMER RESPONSIBILITIES

- Customer shall furnish and install first stick of SCH 80 conduit at the pole. (Conduit length at pole = 3' minimum above ground level)
- Conduit size shall be 3" with an electric sweep, minimum 18" radius.
- Continuous raceway from the transformer shall be scheduled 40 electrical PVC conduit and shall have a minimum depth of 30" at final grade. Maximum length of 200'.
- Support members shall be constructed of 6x6 treated posts or 2" metal rigid conduit and set 3' below final grade. If using rigid metal conduit, caps shall be required on pole.
- Cross member supports shall be constructed of treated wood or metal Unistrut.
- Center of the meter shall be 5' to 6' from final grade.
- Install 1/4" nylon pull rope in conduit.
- Locknuts and grounding bushings required in/at meter base.

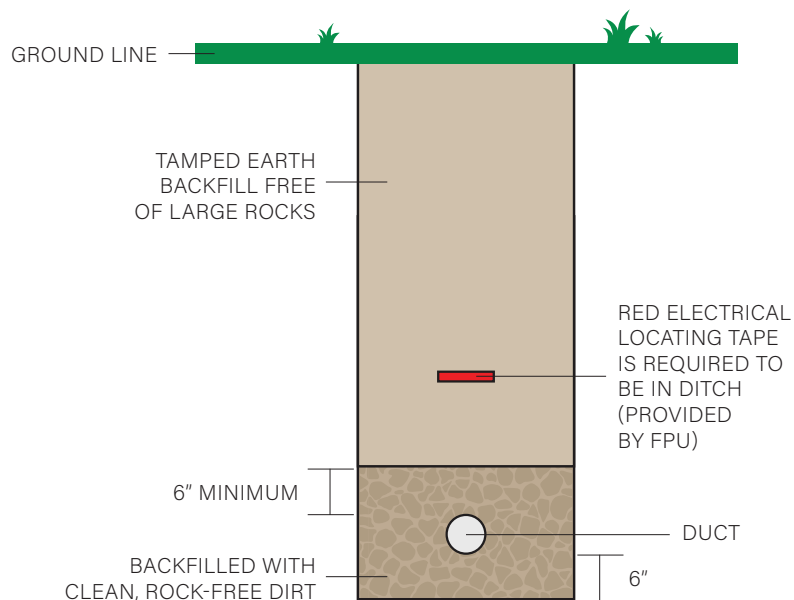
# TYPICAL TRENCH IN TRAFFIC & NON-TRAFFIC AREAS

REVISED AUGUST 2024

## TRAFFIC AREAS

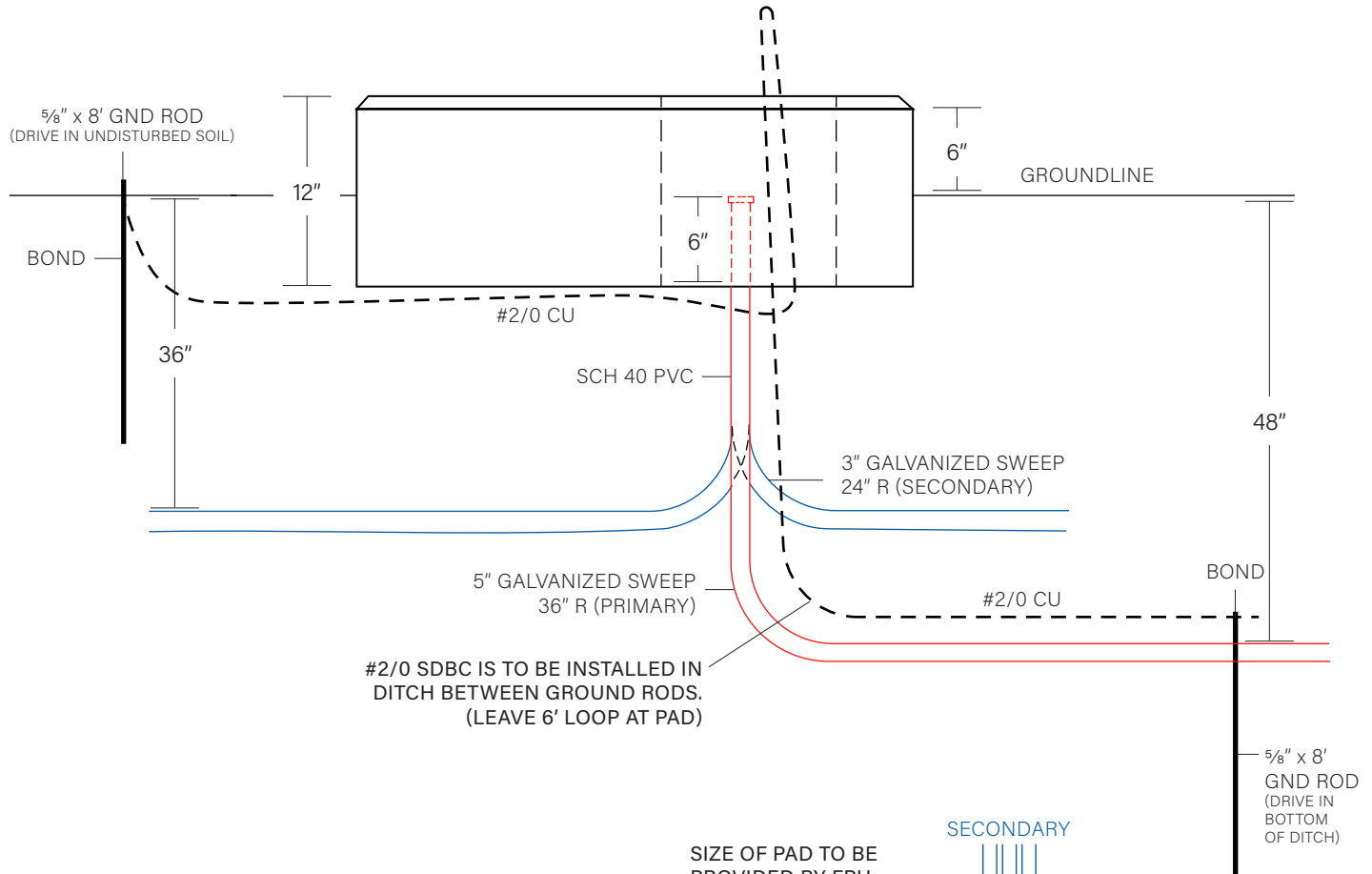


## NON-TRAFFIC AREAS



# TYPICAL 3-PHASE TRANSFORMER PAD

REVISED AUGUST 2024



## REQUIREMENTS

Where metal stubout is required, ground with no. 2 bare copper.

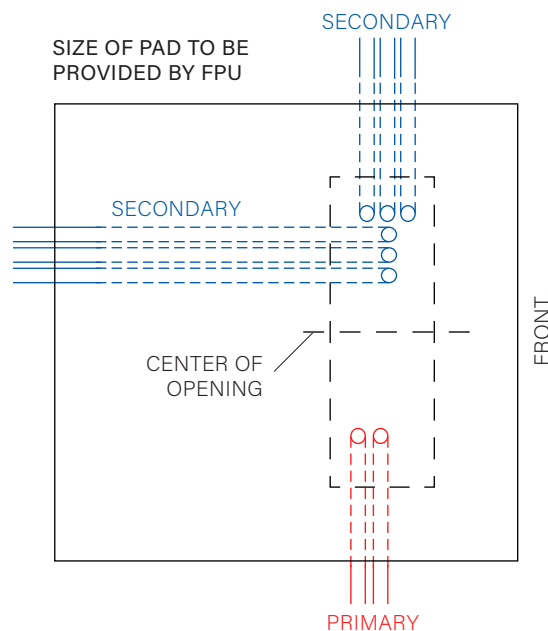
Backfill all ditches under pad with gravel.

FPU will perform a pad inspection before concrete is poured. Call the Engineering Department at 931-433-1522 ext. 340 to schedule an inspection.

No ditch is to be covered until FPU has performed an inspection and pulled warning tape.

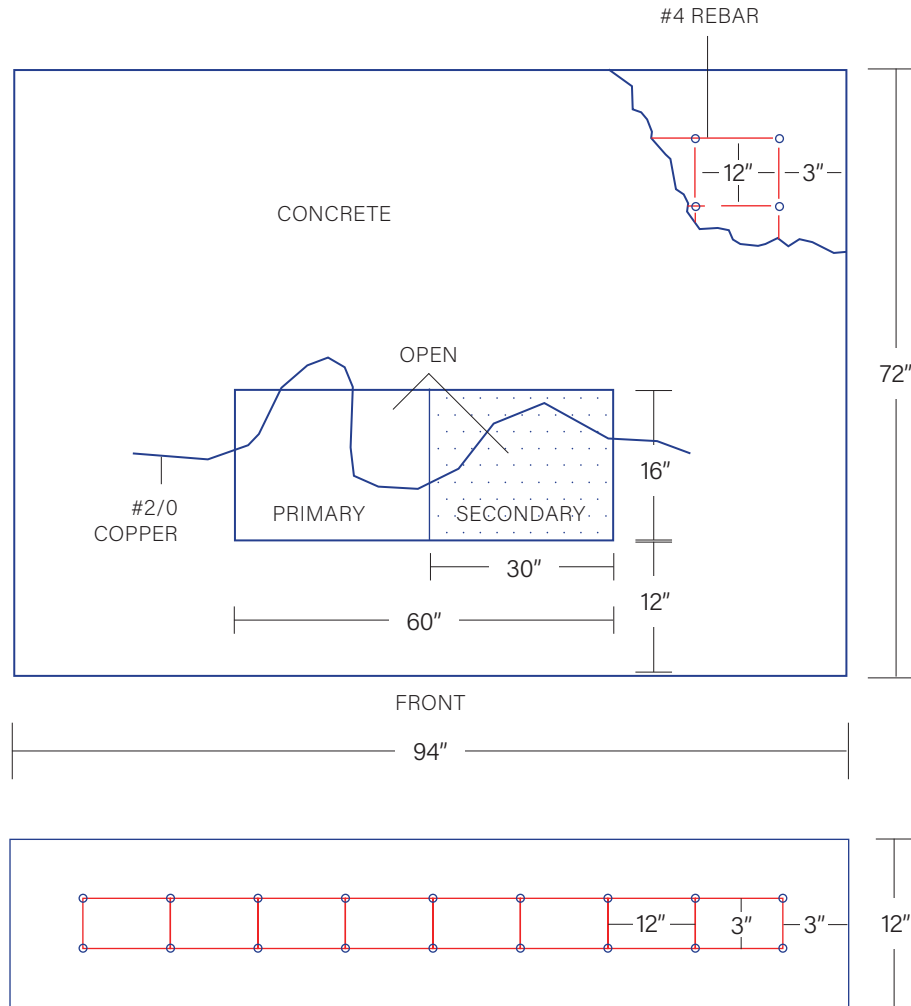
*This spec is to be used in conjunction with the specific spec for the required KVA transformer.*

Contractor is responsible for verifying transformer dimensions and concrete pad dimensions will work together.



# TYPICAL FOR CONCRETE PAD

REVISED AUGUST 2024



## REQUIREMENTS

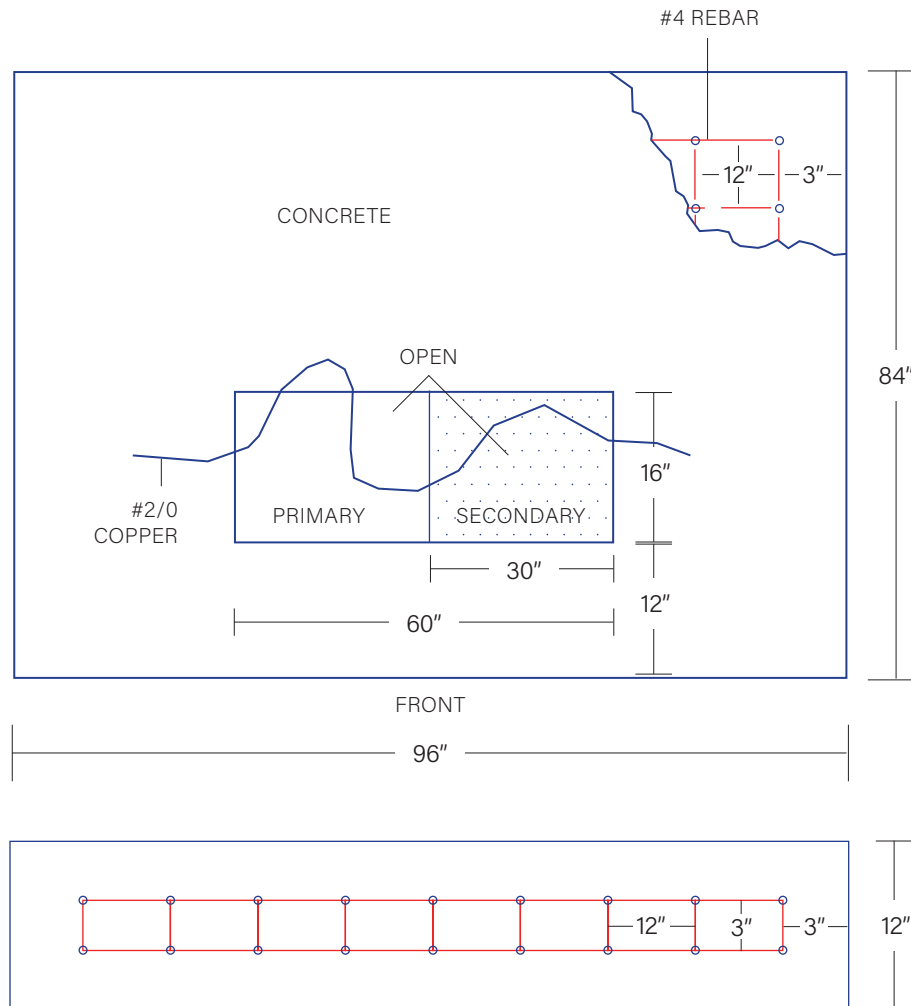
- 2/0 bare copper grounding wire to be placed under pad before pad is poured.
- Wire to be bonded to ground rods with heavy bolted clamp.
- Leave slack in bare CU ground wire in high and low side cavities for FPU to attach to.
- Install conduit grounding bushing for each primary conduit if steel is exposed.
- All material on this sheet to be furnished by customer unless otherwise specified.

## NOTE

- This spec is to be used in conjunction with the general 3 phase pad spec.
- Contractor is responsible for verifying transformer dimensions and concrete pad dimensions will work together.

## TYPICAL FOR CONCRETE PAD

REVISED AUGUST 2024



## REQUIREMENTS

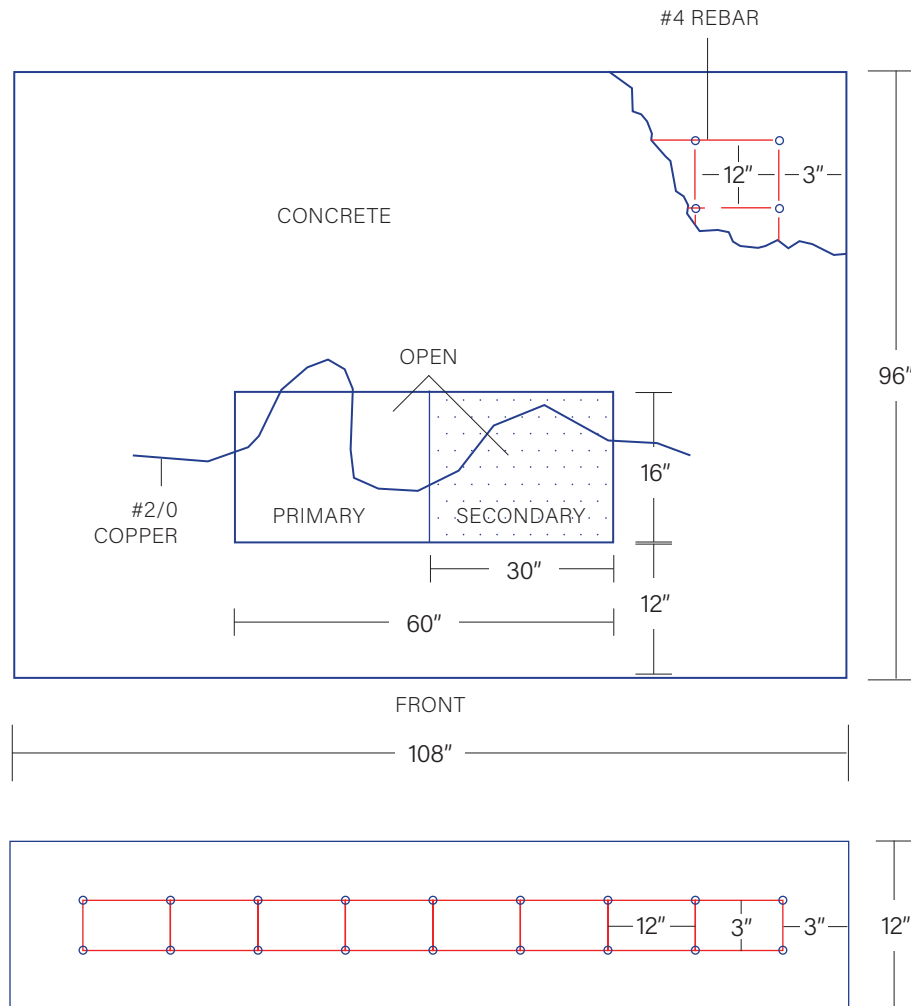
- 2/0 bare copper grounding wire to be placed under pad before pad is poured.
- Wire to be bonded to ground rods with heavy bolted clamp.
- Leave slack in bare CU ground wire in high and low side cavities for FPU to attach to.
- Install conduit grounding bushing for each primary conduit if steel is exposed.
- All material on this sheet to be furnished by customer unless otherwise specified.

## NOTE

- This spec is to be used in conjunction with the general 3 phase pad spec.
- Contractor is responsible for verifying transformer dimensions and concrete pad dimensions will work together.

# TYPICAL FOR CONCRETE PAD

REVISED AUGUST 2024



## REQUIREMENTS

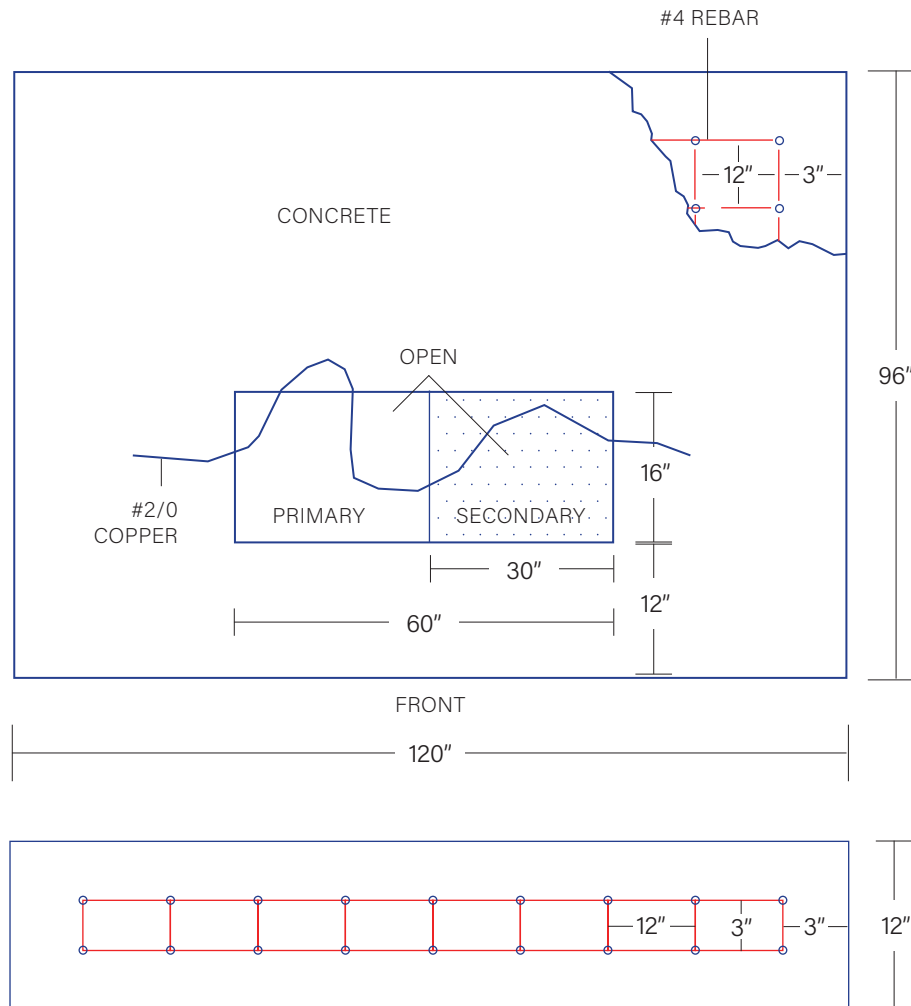
- 2/0 bare copper grounding wire to be placed under pad before pad is poured.
- Wire to be bonded to ground rods with heavy bolted clamp.
- Leave slack in bare CU ground wire in high and low side cavities for FPU to attach to.
- Install conduit grounding bushing for each primary conduit if steel is exposed.
- All material on this sheet to be furnished by customer unless otherwise specified.

## NOTE

- This spec is to be used in conjunction with the general 3 phase pad spec.
- Contractor is responsible for verifying transformer dimensions and concrete pad dimensions will work together.

# TYPICAL FOR CONCRETE PAD

REVISED AUGUST 2024



## REQUIREMENTS

- 2/0 bare copper grounding wire to be placed under pad before pad is poured.
- Wire to be bonded to ground rods with heavy bolted clamp.
- Leave slack in bare CU ground wire in high and low side cavities for FPU to attach to.
- Install conduit grounding bushing for each primary conduit if steel is exposed.
- All material on this sheet to be furnished by customer unless otherwise specified.

## NOTE

- This spec is to be used in conjunction with the general 3 phase pad spec.
- Contractor is responsible for verifying transformer dimensions and concrete pad dimensions will work together.



# PORTABLE GENERATOR SAFETY & INSTALLATION

REVISED AUGUST 2024

## HOW CAN ELECTROCUTION OCCUR?

If a portable electric generator is connected to your home's wiring, the energy it generates can flow back into FPU's power lines and electrocute line workers or others who come in contact with the lines. Even a line that has been knocked down and is verified to be "dead," or not live, by FPU could become energized without warning.

## HOW CAN IT BE PREVENTED?

You must have a qualified, licensed electrician install a double-pole, double-throw transfer switch (see illustration) between the generator and utility power in compliance with state and local electrical codes. Also, let FPU know if you have a generator, as this information can be used for line worker safety.

## WHY DOES IT HAVE TO BE INSPECTED?

It's the law. Tennessee law requires a state wiring inspector to approve any additions or changes to the wiring in your home. Installing a home transfer switch falls into that category.

## WHAT ABOUT CARBON MONOXIDE?

Never use a generator indoors. This includes: your home, basement, garage, crawl space and other enclosed or partially enclosed spaces, even with ventilation. Opening doors and windows or using fans will not prevent carbon monoxide build-up in the home.

## WHAT ABOUT ELECTRICAL HAZARDS?

Follow the manufacturer's instructions for safe operation and maintenance. Keep the generator dry and do not use in rain or wet conditions. Make sure your hands are dry before touching the generator. Plug appliances directly into the generator, and make sure it is properly grounded.

Never try to power the house wiring by plugging the generator into a wall outlet. This is an extremely dangerous practice that presents an electrocution risk to utility workers and neighbors served by the same utility transformer. It also bypasses some of the built-in household circuit protection devices.

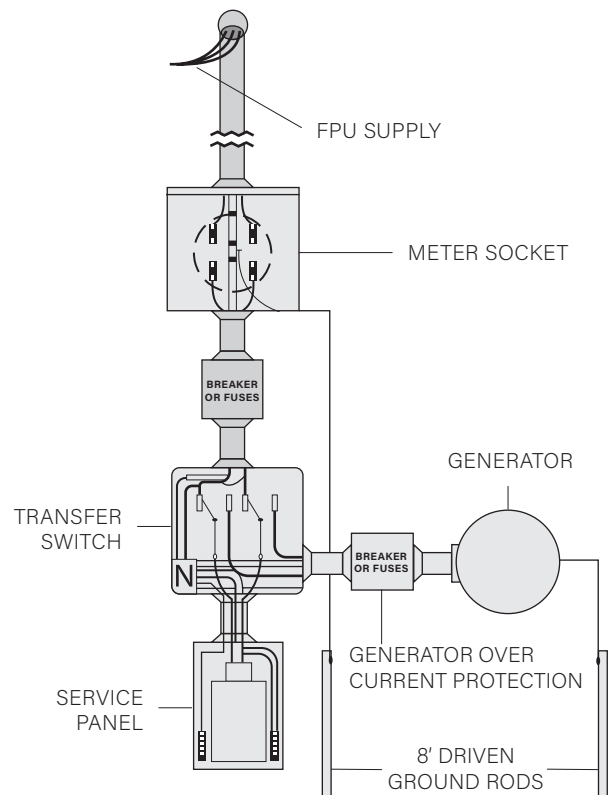
Do not overload the generator. A portable generator should only be used when necessary and only to power essential equipment or appliances.

## ARE THERE ANY FIRE HAZARDS?

Never store generator fuel in the home. Gasoline and other flammable liquids should be stored outside of living areas in properly labeled, non-glass safety containers. Before fueling the generator, turn it off and let it cool down. Gasoline spilled on hot engine parts could ignite.

## TYPICAL INSTALLATION FOR SERVICE ENTRANCE RATED AT 200 AMPERES OR LESS

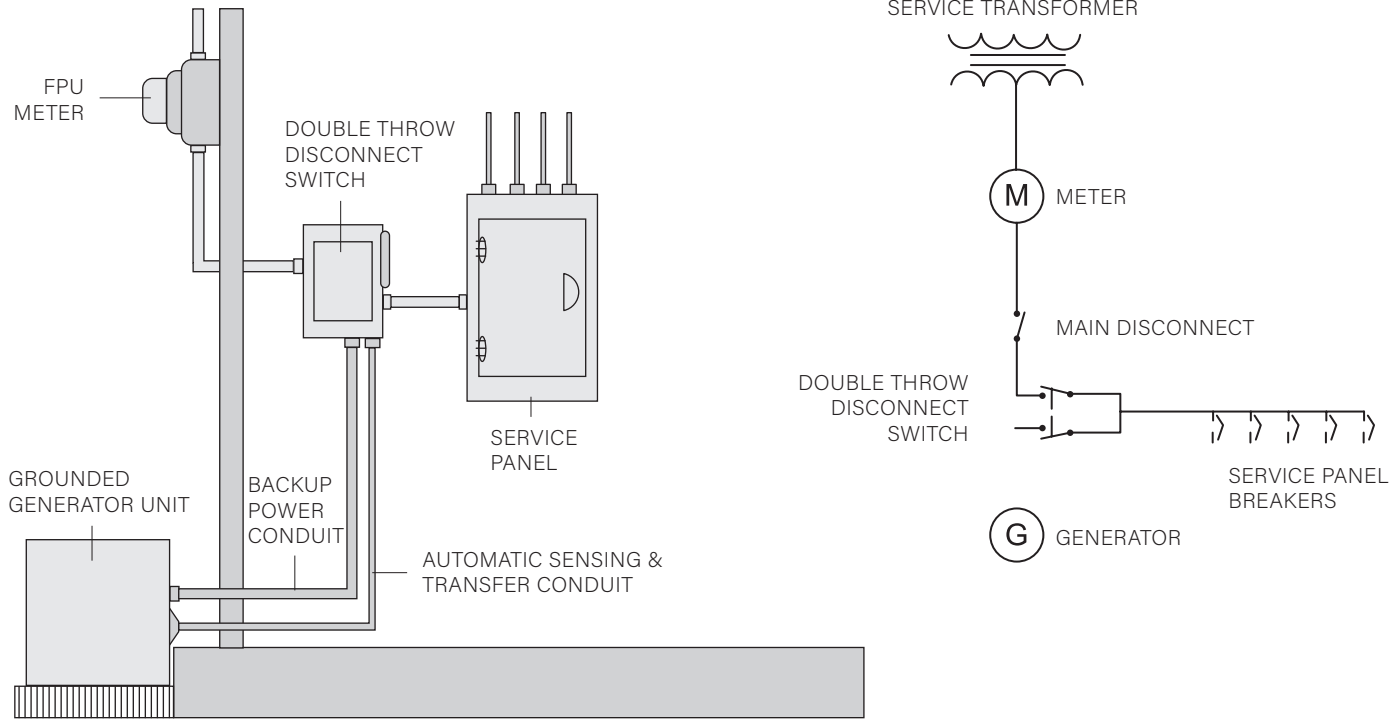
- Conductor sizes from generator to transfer switch will be determined by generator capacity.
- Over-current protection for the generator will be determined by generator capacity.
- Transfer switch shall be a double-throw type that breaks contact of ungrounded conductors. The neutral will not be broken by the switch.
- Transfer switch will be bonded to the service entrance ground with #4 solid copper conductor.
- If the transfer switch is suitable for service equipment, the overcurrent protection between the meter base and the transfer switch is not required.





# DOUBLE THROW SWITCH CONFIGURATION

REVISED AUGUST 2024



## NOTES

At Fayetteville Public Utilities, the safety of our customers and employees is of highest importance. In keeping with this philosophy, the following is a guideline for our customers who wish to use power generators, both at the residential and commercial level.

For Green Power Partners (solar, wind, etc.) contact FPU.

## DEFINITION

Article 702 of the National Electric Code states that "Optional standby systems are intended to protect private business or property where life safety does not depend on the performance of the system. Optional standby systems are intended to supply on-site generated power to selected loads either automatically or manually."

Any standby generators connected to FPU service locations will be considered "Optional standby systems." All specifications to follow will be regarding said systems.

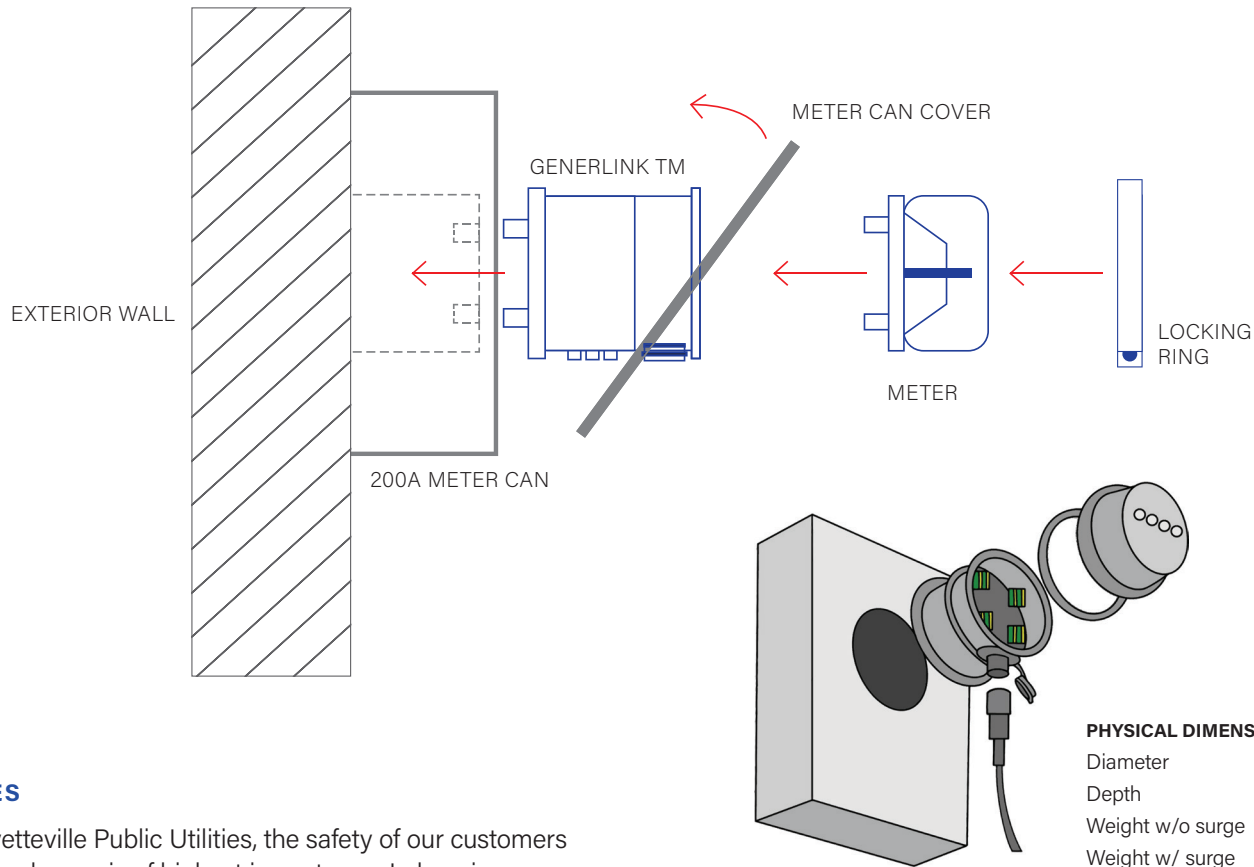
## REQUIREMENTS

It is required that a "double throw switch" or automatic transfer switch be present when a generator is connected to an FPU service point. The purpose of a double throw switch is to isolate an installed generator from the FPU system. A double throw switch will ensure that the generator is not interconnected with FPU distribution lines. In the event of a power outage, the absence of such switch could endanger FPU employees conducting repairs on the lines. Be aware that during an outage, a generator interconnected with the FPU system can result in serious injury including the death of any FPU employees working to restore power. A double throw switch will ensure interconnection does not exist. **The distribution panel circuit breaker is not a sufficient method of system isolation. Installed switches must be approved by a state of Tennessee Licensed Electrical Inspector.**

*The diagrams shown describe how the double throw switch should be configured with your connection.*

# GENERLINK METER COLLAR

REVISED AUGUST 2024



## NOTES

At Fayetteville Public Utilities, the safety of our customers and employees is of highest importance. In keeping with this philosophy, the following is a guideline for our customers who wish to use the Generlink brand meter collars for quick connection or disconnection of portable generators, both at the residential and commercial level.

For Green Power Partners (solar, wind, etc.) contact FPU.

## DEFINITION

Article 702 of the National Electric Code states that "Optional standby systems are intended to protect private business or property where life safety does not depend on the performance of the system. Optional standby systems are intended to supply on-site generated power to selected loads either automatically or manually."

Any standby generators connected to FPU service locations will be considered "Optional standby systems." All specifications to follow will be regarding said systems.

## REQUIREMENTS

1. Main distribution panel must be 200 amps or less. Panels greater than 200 amps will be required to install the normal transfer switch arrangement as shown in drawing *Double Throw Switch Configuration*.
2. Customer must purchase the Generlink device.
3. FPU will install the Generlink device.
4. Only the Generlink MA23/24-N/S device will be allowed.
5. Customer must complete a "Release of Liability" form prior to installation.

*The diagrams shown describe how the Generlink device should be configured with your connection.*